Contents Volume 42

Vol. 42 No. 1, March 1994

Prediction of tool failure from a probabilistic point of view
U. Engel (Erlangen, Germany) 1

A Technical review of the laser drilling of aerospace materials
C.Y. Yeo, S.C. Tam, S. Jana and M.W.S. Lau (Singapore) 15

Study of the influence of deformation and thermal treatment on the ultrasonic behaviour of steel
R. Prasad and S. Kumar (Ranchi, India) 51

A theory for initial yield conditions in tube bulging with a urethane rod
S. Thiruvarudchelvan (Singapore) 61

Investigation of the hydroforming of spherical vessels from a new type of flat polyhedral shell
S.H. Zhang and Z.R. Wang (Harbin, China) 75

Analysis and control of the noise produced by presses during stamping
W.M. Chen, X.B. Cao and N.G. Gao (Harbin, China) 87

A review of the Nd:YAG laser marking of plastic and ceramic IC packages
Y.M. Noor, S.C. Tam, L.E.N. Lim and S. Jana (Singapore) 95

Report 135

Vol. 42, No. 2, April 1994

Preface iii

Comparison of two commercial FEM codes in cold extrusion simulation
T. Reinikainen (Espoo, Finland), T. Welo (Trondheim, Norway), A.S. Korhonen and S. Kivivuori (Espoo, Finland) 137

Incremental flow procedures for the finite-element analysis of thin sheet superplastic forming processes
J. Bonet and R.D. Wood (Swansea, UK) 147

Simulation model of cold pilgering
P. Huml and R. Fogelholm (Stockholm, Sweden) 167

Thermal and mechanical coupling in granular modeling for metal injection molding
T. Iwai, T. Aizawa and J. Kihara (Tokyo, Japan) 175

STEELTEMP – A program for temperature analysis in steel plants
E.E. Madsen (Kjeller, Norway) 187

Three-dimensional granular modeling for metallic powder compaction and flow analysis
S. Tamura, T. Aizawa and J. Kihara (Tokyo, Japan) 197

Interface element modelling of friction in rolling
A.B. Richelsen (Lyngby, Denmark) 209

Numerical simulation of the evolution of the microstructure in closed-die forging
M. Pietrzyk, M. Glowacki (Kraków, Poland) and J.G. Lenard (Waterloo, Canada) 217

The wedge rolling test
J. Edberg, L.-E. Lindgren and M. Jarl (Luleå, Sweden) 227

Vol. 42, No. 3, May 1994

The influence of rolling temperature on roll wear, investigated in a new high temperature test rig
S.-E. Lundberg and T. Gustafsson (Gävle, Sweden) 239

Kinematic element modelling of horizontal two-roll piercing
E. Doremus and J. Oudin (Valenciennes, France) 293

The effect of combined induction heating and shot-peening on the properties of oil-pump arms
H. Jinliang, L. Yanxiang and Z. Yaomine (Henan, China) 311

A force model for a single-point tools with a chamfered main cutting edge
K.-H. Fuh and C.-S. Chang (Taipei, Taiwan, ROC) 319

Comparison of the performance obtained with a YAG laser cutting according to the source operation mode
D.F. Grevey and H. Desplats (Le Creusot, France) 341

Friction characteristics of magnesium alloy ZM-21
T. Raghu, O. Sivakesavam and G.G. Saha (Hyderabad, India) 349

Vol. 42, No. 4, May 1994

Design of pencil-type milling cutters for worm surface generation
C.-B. Tsay and S.-L. Chang (Taiwan, China) 361

Review: Various methods of machining advanced ceramic materials
I.P. Tuersley, A. Jawaid and I.R. Pashby (Coventry, UK) 377

Machining of advanced engineering materials using traditional and laser techniques
K.A. Fenoughty, A. Jawaid and I.R. Pashby (Coventry, UK) 391

Physical and numerical modeling of hot closed-die forging to reduce forging load and die wear
H.-Y. Kim, J.-J. Kim and N. Kim (South Korea) 401

Hobbing: A renewed method for producing moulds and dies
A. Hobemägi (Estonia) 421

End effect in the explosive forming of tubes
M.M. Moshksar and S. Borji (Shiraz, Iran) 431

Research on the compensatory welding method for preventing welded joints of polyhedral shells from fracturing during hydrobulging
Y. Shijian, Z. Guozhu and Z.R. Wang (Harbin, China) 442

FEM simulation of the static and dynamic forming of circular plates
K. Kormi, R.A. Etheridge and D.C. Webb (Leeds, UK) 451

FEM simulation of the pressing of a strip into a cylindrical die and of a circular plate into a hemispherical one and their comparison with experiment
K. Kormi, D.C. Webb and R.A. Etheridge (Leeds, UK) 463

Acknowledgement of Referees 474
Author Index Volume 42 475
Contents Volume 42 476